This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-80. (Cancelled).

81. (Previously Presented) A heat exchange system comprising:

a direct expansion geothermal heat exchange system having an operational working pressure and including:

a compressor;

an the interior heat exchanger;

an exterior, sub-surface, heat exchanger;

refrigerant grade tubing connecting the interior heat exchanger and the exterior, sub-surface, heat exchanger with the compressor;

a system refrigerant charging the system, wherein the system refrigerant has a working pressure at least 33% greater than a working pressure of R-22 refrigerant; and

wherein the system operates with a continuous operational pressure at least 33% greater than the working pressure of R-22 refrigerant.

82. (Previously Presented) The system of claim 81 wherein the system refrigerant comprises R-410A refrigerant.

83. (Previously Presented) The method of claim 82 further comprising a polyol ester lubricating oil positioned to lubricate the compressor.

84. (Previously Presented) The method of claim 81 further comprising providing a filter dryer that has been oversized by a factor of at least 10% above the size of a filter dryer used in an R-22 based system.

85. (Previously Presented) A method of exchanging heat in a direct expansion geothermal heat exchange system, comprising:

providing an above-ground, interior heat exchanger;

providing a sub-surface, exterior heat exchanger;

operably connecting the interior and exterior heat exchangers to a compressor using refrigerant-grade tubing;

charging the geothermal heat exchange system with a system refrigerant having a working pressure at least 33% greater than a working pressure of R-22 refrigerant; and

operating the compressor to maintain the geothermal heat exchange system at a continuous operational pressure substantially equal to the working pressure of the refrigerant.

86. (Previously Presented) The method of claim 85 wherein the system refrigerant comprises an R-410A refrigerant.

87. (Previously Presented) The method of claim 86 further comprising providing a polyol ester lubricating oil for the compressor.

88. (Previously Presented) The method of claim 87 in which the geothermal heat exchange system has a heat exchange capacity, the method further comprising providing a filter dryer in fluid communication with both the interior and exterior heat exchangers, wherein the filter dryer is oversized by a factor of at least 10% in comparison to the size of a filter dryer used in an R-22 based system having a similar heat exchange capacity.

89. (Previously Presented) A direct expansion geothermal heat exchange system having an operational pressure and including:

a compressor;

an interior heat exchanger;

an exterior, sub-surface, heat exchanger;

refrigerant grade tubing connecting the interior heat exchanger and the exterior, sub-surface, heat exchanger with the compressor;

a system refrigerant charging the system, wherein the system refrigerant has a working pressure at least 33% greater than a working pressure of R-22 refrigerant; and

wherein the compressor is sized to continuously maintain the operational pressure of the geothermal heat exchange system at the working pressure of the refrigerant.

90. (Previously Presented) The system of claim 89 wherein the system refrigerant comprises R-410A refrigerant.

91. (Previously Presented) The system of claim 90 further comprising a polyol ester lubricating oil positioned to lubricate the compressor.

92. (Previously Presented) The system of claim 89 in which the geothermal heat exchange system has a heat exchange capacity, the system further comprising a filter dryer in fluid communication with both the interior and exterior heat exchangers, wherein the filter dryer is oversized by a factor of at least 10% in comparison to a size of a filter dryer used in an R-22 based system having a similar heat exchange capacity.

93. (Previously Presented) A direct expansion geothermal heat exchange system having an operational pressure and a heat exchange capacity, the geothermal heat exchange system including:

a compressor;

a polyol ester lubricating oil positioned to lubricate the compressor;

an interior heat exchanger;

a filter dryer in fluid communication with the interior heat exchanger, the filter dryer being oversized by a factor of at least 10% in comparison to a size of a filter dryer used in an R-22 based system having a similar heat exchange capacity;

an exterior, sub-surface, heat exchanger;

refrigerant grade tubing connecting the interior heat exchanger and the exterior, sub-surface, heat exchanger with the compressor;

a system refrigerant charging the system, wherein the system refrigerant has a working pressure at least 33% greater than a working pressure of R-22; and

wherein the compressor is sized to continuously maintain the operational pressure of the geothermal heat exchange system at the working pressure of the refrigerant.

94. (Previously Presented) The system of claim 93 in which the system refrigerant comprises R-410A refrigerant.

95. (Previously Presented) A direct expansion geothermal heat exchange system having an operational pressure and a heat exchange capacity, the geothermal heat exchange system including:

a compressor;

an interior heat exchanger and an exterior, subsurface heat exchanger

refrigerant grade tubing connecting the interior heat exchanger and the exterior heat exchanger with the compressor;

a system refrigerant charging the system, wherein the system refrigerant is an R-410A refrigerant;

a polyol ester lubricating oil positioned to lubricate the compressor;

wherein the compressor, interior and exterior heat exchangers, and refrigerant grade tubing are configured to withstand a system operational pressure at least 33% greater than a working pressure of R-22 refrigerant.

96. (Previously Presented) The system of claim 95 in which the system has a filter dryer in fluid communication with the interior heat exchanger, the filter dryer being oversized by a factor of at least 10% in comparison to a size of a filter dryer used in an R-22 based system having a similar heat exchange capacity;